

## **Exploiting Fishing Resources for Agribusiness Development of Captured Fisheries in the City Bengkulu**

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### **ABSTRACT**

The study are aimed to identify the performance of the fishermen's resources, to identify a partnership between fishermen and fish entrepreneurs, and to formulate alternative development model of fishermen's resources with agribusiness insightful. The research method is based on the survey method to collect primary and secondary data. The data analyzing use descriptive methods, descriptive statistics, and method of Logical Framework Analysis. The results shows that the fishermen are in the productive age with the typology of the nuclear family; more than half of the fishermen have junior secondary education level; fishing experience is categorized long enough that 18 years; fishermen have the motivation to keep working as a fisherman and a hierarchy of compassion (safety needs) by 60 percents; technical and managerial skill of fishermen's possession in general is quite good but the managerial aspects of fishing is still not good. Most fishermen have high accessibility to the means of fishing but only a few fishermen who use capital loans of non-formal in situations, mostly fisherman actively looking for information about fishing technology, relationship between the fishermen and fish processors or fish collectors is a patron-client pattern, the market formed in the study area is oligopsonistic market, and net income of fishermen can be categorized enough high. There are two alternative models of fishermen resources develeopment with agribusiness insightful: training model with a training for impact approach and educatin model.

**Key words:** agribusiness, fishermen's resources, development model.

### **INTRODUCTION**

Bengkulu city has the potential fish catch of 145,334 tonnes per year, but the wealth of marine natural resources has not been developed significantly and investors are also not interested to invest in the subsector of fisheries that impact the lives of fishing communities in the city of Bengkulu that remain poor. Powerlessness traditional fishing in the area of the city of Bengkulu in increasing the production of capture constrained on capital issues and in turn they can not afford to buy modern equipment. Based on the reality of resources fishing in Bengkulu City, the study will be focused on the performances of a partnership and resource development fishermen in relation to these partnerships and alternative models of fishermen's resources development. Therefore, the purpose of this study is to identify the performance of the fishing resources, to identify the patterns of partnerships and the development of fishing resources in relation to the partnership, and to formulate an alternative model of development resources agri-minded fishermen

### **MATERIALS AND METHODS**

The method of the study is a survey method. Survey method is a method of research which information is acquired directly from individuals/groups in the population (Dane, 1987 and Bailey 1990).

The study was conducted in 2014 in the District Kampung Melayu Bengkulu city in which the specified purpose (purposive) with consideration at this location there are many fishermen for the city of Bengkulu. The sample of the fishermen in this study were taken as many as 30 of the population. The population in this study is a fisherman and dried fish processors household scale. Another sample interviewed are dried fish processors and traders who were identified by using Snowball method.

Data / information collected in the form of primary and secondary data. Primary data is data obtained from the direct respondent by an interview based on questionnaires. In this study, the primary data collected include data relating to the attributes inherent in respondents, the description of the

external variables (external variables). Meanwhile, secondary data will be obtained from the data that already exists as of the urban village office, sub-districts and other agencies associated with this research.

The method of Participatory Rural Appraisal (PRA) is used to obtain qualitative information. Meanwhile, Focus Group Discussion (FGD) approach was conducted to collect data/ information more details about the opinions of fishermen who became the main focus of this study. In this FGD participants are fishermen respondent government officials (urban village and sub-district), agent reformer (fishing instructor), and leaders of fishing communities.

Technique of analyzing data in this study generally consist of two types: descriptive method and descriptive statistics by using test tables and test charts.

### **Descriptive method (descriptive)**

Descriptive analysis is used to explain thoroughly (comprehensive) on the data and information obtained from the field. In this descriptive analysis of the distribution of the quantitative data obtained is presented through the process codetifikation, categorization, interpretation, meaning, and abstraction (Meleong 2004 and Sukandarrumidi, 2004). Descriptive analysis is conducted in order to reveal the phenomenon of the object being studied. With descriptive analysis will be obtained a picture of something unusual or unique in a fishing community as well as an overview of the variations that exist within the fishing communities, especially with regard to the object and the subject of this study. In this descriptive analysis is more emphasis on efforts to explain the characteristics of respondents based on internal variables, such as demographic characteristics, educational level, experience of managing a business, motivation in trying, and technical and managerial skills.

### **Descriptive Statistics**

This analysis will be used to assess a partnership between fishermen and dried fish processors so that the study will obtain an overall picture of the forms of partnership pattern that occurs particularly in the context of resource development in the fishing city of Bengkulu. External variables that will be used to assess patterns of partnership include accessibility to the means of fish capture, the accessibility level of capitalization facilities, accessibility to resources, fishing and enterprise business relationships and market aspects.

### **LFA method (Logical Framework Analysis)**

The main method to get the design development of specific fishing resource is LFA (Logical Framework Analysis). LFA is used to create a model for the development of the fishing resources based on logical analysis as well as a variety of conditions and certain assumptions. LFA is a process for structural analysis and systematization of a project or program idea. Furthermore, the application LFA involving stakeholder analysis, problem analysis, setting goals and strategies for the selection of a project or program. Thus, the LFA will menghasilkan forms of activities that can be verified or evaluated. In the design of the development model of the fishing resources will be focused on training model, the model deployment, and education model.

## **RESULTS AND DISCUSSION**

### **Description of the internal variables of fishermen**

#### **Demographic characteristics**

The result shows that by the age of fishermen turned out to be in the range of productive age with an average age of fishermen 40 years with a range 25-60 years. This is supported by the Mubyarto's opinion (1989), in which the productive age are in the age range of 15-64 years. With this productive age fishermen have a strong spirit and energy in fishing effort, which is expected in the productive age and length of experience powered by sail or fishing can support fishing activities to achieve optimal fishing effort. Furthermore, Mubyarto (1989) found a person in the productive age will deliver maximum results when compared with the age below or above the productive age.

The number of family members of fishermen an average of 4.6 people, this indicates that the typology of the size of the fishing families are the parents of three children following (nuclear family). Similarly, the number of productive age in the fishing families an average of 2.96 means soul in a family of fishermen have productive age that parents and one child.

### **Level of education**

The success of a fisherman in the fishing effort of factors will affect the formal education, because the level of education determines a person's ability to absorb information and innovation (Anna, 2004). Level of education possessed by fishermen are another factor to the success of the fishermen in the work, because of the formal education would affect the mindset, actions and deeds against everything related to the business of fishing by fishermen (Mardani, 2009).

The result shows that the level of education of fishermen vary from the level of education is not complete primary school up to the level of high school education. Most fishermen graduating at the level of secondary education or education for 9 years old is 63.3%. In relation between education level and coupled with the experience of fishermen at sea for fishermen will affect the productivity of the total catch. It means that the higher the formal education and experience at sea that is the longer, then productivity will be higher catches. On the basis of the background level of education possessed by fishermen, then further explored the aspirations of fishermen regarding their children's education (family members), obtained a description that fishermen want to send their children to higher education which amounted to 80%. But there are some fishermen who found the children of fishermen enough educational level is not too high.

### **Experience as Fishermen**

Fishing experience included as variables that affect the performance of the fishermen on the assumption that the longer a person cultivate his job then his performance on the job, the better. Success in fishing effort by fishermen not only supported by a factor of formal and non formal education, but there are other factors that favor success in fishing effort that is experience in the fishing business. This experience can help fishermen in decision-making, and a fisherman would tend to learn from practice so as to have an idea of what will be done to increase the productivity of fish stocks in subsequent times.

The result shows that the average experience of the fishermen was 18.26 years, indicating that the experience or livelihood as fishermen can be considered long enough. With sufficient length of fishing experience of fishermen will be able to draw up plans in an effort to better fishing and precise, and more wisely in addressing any changes that occur either profit or loss from the activities of the fishing effort.

### **Motivation in business**

In this study motivation theory used is the theory developed by Maslow. Maslow approach is particularly useful because the group of people who belong to the lower middle layer. There are five scale measurement of motivation according to Maslow, namely: 1) physical needs; 2) the fulfillment of a sense of security; 3) the fulfillment of affection; 4) the desire to be appreciated; and 5) the fulfillment of self-actualization. Maslow's theory in the sense that there is a certain value in classifying needs, and there is also a distinction between needs in order bottom to the needs in the order of the top (Thoha, 1995).

It is observed that the fishermen motivation to keep working as fishermen, generally located in the hierarchy (scale) meets compassion (safety needs), which was 60%. However, there are some fishermen who have the motivation or are in the hierarchy of physical needs (physiological needs). It can be concluded that the motivation to become fishermen no longer solely to meet the needs of clothing, food, and shelter. This is evident from the observation of the condition of the house is owned, in which almost all the fishermen have a permanent home with good furniture.

### **Technical and managerial capabilities**

Definition focused on the ability of knowledge, especially the knowledge of fishermen catching and handling the catch and managerial knowledge. The result shows that fishing activities carried out by fishermen in general has been good enough. This is reflected in the preparation/carriage provisions for fishing, the installation of nets, as well as looking for locations that are expected there are many fish. This condition means that the fishermen had prepared a fairly good fishing techniques. But in terms of processing (fishing already arrested) only 15% of fishermen who undertake processing and most of the fishermen who fish processing sourcing of raw materials from the purchase, and then done processing/ processing of fish.

To identify the managerial knowledge conducted using standard questions are: decision making, planning, evaluation, communication, and organization. The results show that the fishermen who make a plan before going to sea only by 40%. This is because the fishermen do not know what the roles, functions, and benefits from the plan before going to sea. For the future necessary technical guidance on the role of planning for the fishermen. In taking pre-sea carried out by fishermen mostly fishermen that 80% of decision-making is done by the fishermen themselves, while 76.6% of fishermen conduct joint decision-making between the fisherman and his wife. It means that this condition is a good thing in the household of fishermen, because the wife involved in the decision making patterns prior to engage in fishing or in other words the parallels between fishermen and wife in an effort to make fishing business. In communication and organization, everyone will be a member of the organization. Everyone agrees that communication between them is the source of life and dynamic organization (Thoha, 1995). Every theory thorough organization, communication will occupy a prominent place because of the arrangement, breadth, and scope of the organization as a whole is determined by communication techniques. Communication is a social process that has the widest relevance in the functioning of any organization or community group.

The result shows that the communication is done by fishermen with fellow members of the fishermen or members of the public prior to engage in fishing, only amounted to 36.6%. This situation indicates that the fishermen or fishing communities rarely make sharing to members of fishing communities and fishermen believes that experience will go to sea is a more decisive success in fishing effort.

Evaluation is the process of checking that include activities for comparing actual results with expected results. This activity reporting and assessment in the form of an increase or improvement. Logically evaluation can determine how the actual results whether or not in accordance with the results predicted, so as to determine what action to take next (Garrett and Silver, 1968).

In this study, the evaluation question is the process of checking or assessment carried out by fishermen to catch fish with a total production of catches estimated production quantities. The results showed that only 40% of fishermen conduct evaluations after the fishing activities carried out. This illustrates that conditions for fishing activities of evaluation is not an important thing in the business activity of fishing.

### **Description of External Variables of Fishermen**

#### **Accessibility to the Means of Arrest**

Ease obtain the means at sea is one factor that can facilitate the activities of fishermen at sea. completeness means fishing in this regard include: fuel, oil, ice, and property at sea. The result shows that 63.4% of the fishermen said easy in obtaining means of arrest, while 36.6% stated fishermen find it difficult to obtain the means of arrest. Then obtain the arrest means is closely related to the pattern of the relationship between fish processors (collector) with the fishermen. In this case the fish processors (collector) will provide capital assistance / credit management and fishing means catching fish obliged to sell their catch to the fish processors (collector).

#### **Means the Level of Accessibility of Capital**

Ease to obtain a loan (capital) good business formal institutions (banks) and non formal education is one of the determining factors that can facilitate the activities of fishermen. The result shows that 33.3% of fishermen said that they had to get a loan / capital from non-formal institutions, but fishermen have never borrowed from formal institutions.

Based on the recognition of fishermen who never borrowed capital, in an effort to obtain capital fisherman said easy to reach it. While 66.7% said never borrow fishing venture capital. In the opinion of fishermen if the borrowed capital will incur expenses in fishing activities. Based on data collected at the scene cooperative study turned out to play a lot in helping add pemodalan fishermen but the fishing has not avail banking services in capitalization. This is due to the loan capital from non-formal institutions tend to be not as complicated as a formal institution.

### **Accessibility to resources**

Information plays a role in shaping the attitude of a person's curiosity, which is an attitude to want to implement new things (new technology) earlier than others. Activity search for information about new ideas (innovation technology) community groups are active usually more innovative than passive social groups (Mardikanto 2010 and Purwoko, 2009).

The results show that 80% of fishermen looking for information on fishing technology, while 20% said it was not seeking information fisherman fishing technology. This is the reason that the fishermen do not have time to search for information. For the fishing resources of new fishing technologies acquired from neighbors / fellow fishermen, which amounted to 76% and 23.3% fishing technology information obtained from the television media. This indicates that the fisherman has a cosmopolitan relatively low level in searching for information technology. This situation is shown by the use of the mass media is still at least in the use of fishing technology.

### **Fisherman relationship with fish processors/collectors**

Fisherman relationship with fish processors/collectors are growing more client patron pattern in which the position of processors/collectors is the patron of fish and fishermen as a client. Meaning that fish processors/collectors act as placeholders (market) catches. In addition, fish processors/collectors provide working capital to fishermen in need, and in return the fishermen are obliged to sell their catch to the providers of working capital.

As a result of these mechanisms are very weak bargaining power of fishermen in determining the price of fish catches or in other words, fish processors/collectors are more dominant in determining the price of fish catches. For fishermen independent bargaining position will be stronger in the sense of fishermen may choose markets that buy their catch at a high price.

The result shows that dependency of fishermen against the loan/capital from non-formal institutions is still relatively small in the amount of 33.3%. It can be understood that the relationship between fishermen and fish processors / gatherers, fishermen still have a better bargaining position in setting the price of fish catches. Fisherman relationship with fish processors/collectors only limited marketing of fish and the provision of venture capital, the risk of failure is not a matter of fishing effort that can occur.

### **Aspects of the market**

The success of a business in the market is strongly influenced by the structure and characteristics of the market, there are four characteristics that are always attached to the market, namely: (1) the number and scale of business or participants involved, (2) the characteristics of the products traded, (3) requirements for "exit "or" enter "the market, and (4) control of information by participants involved in the market (Limbong and Sitorus, 1987 and Kotler and Gary, 1997). Furthermore, based on the number of participation involved and the characteristics of the product, the market grouped into six types: (1) genuine competition, (2) monopsony, (3) oligopsony pure, (4) oligopsony, (5) a monopoly, and (6) monopsony

(Limbong and Sitorus, 1987).

The results show that the market is happening at the site of the research is a form of distinguishing oligopsony price and product quality. This is because in the market there are only a few fish processors and collectors who holds the catch. This occurs because the number of fishermen who sell their products far more than fish processors and collectors, so the competitive market structure is not created.

### **The Income of Fishermen**

Gross income minus the costs to be incurred (excluding investment) would be obtained net income per at sea from one unit fleet. The result shows that the net income of the fishermen of Rp3.510.000,00 / month.

### **Draft Model Resource Development of Fisherman**

Development of human resources is the most important investment that may be carried out by an organization. Due to the development of human resources and at the same time improving the quality will provide a substantial contribution to the growth and economic progress of a country. Similarly, the development of fishing resources and quality improvement will contribute significantly to the economic improvement of fisheries.

### **Training Model**

Training for fishermen in these studies are more likely to approach "training for impact", while not neglecting other approaches. In the approach to this training there was some indication / criticism about the results of training, namely: (1) the results of the training are less able to meet the business needs, problems, and opportunities for future business, (2) the effectiveness of cost per output is insufficient by performance training alumni, (3) weak collaboration between the designers of training programs with business in designing a training "business oriented". Given the criticism expected approach of "training for impact" can answer all the weaknesses, while improving performance training alumni. Furthermore, by using the training for impact, the training is more focused on project-driven, not an emphasis on curriculum based.

Based on the results of this study, there is information that is important and can be used in the preparation of training programs based training approach for impact. The results show that as much as 100% of fishermen say require training on fishing with new technologies, techniques see the point where the largest fish, and predict the state of the weather, as well as training on fish management techniques. In addition, it is known that the alignment can be pursued through improved means of modeling, improved pricing system and improvement of training managerial ability.

However not all of these needs can be addressed using the training. Therefore, other than through the training required institutional improvements (especially regarding the market and the standard price). In terms of managerial capacity, managerial aspects must be repaired immediately before going to sea is the element of planning, communication and organization as well as elements of evaluation after fishing. This is shown by the statement of fishermen with a low percentage value. Besides training related to the accessibility of capitalization institutions should be held, especially regarding the procedures and requirements of bank credit. From a technical perspective, the training needs to be given generally involves grading and handling catches. By fixing it expected the managerial ability of fishermen to be better.

### **Education Model**

Level of education possessed by fishermen as an important factor supporting the success of fishermen in the work, in addition to the factor of experience as a fisherman. Because of formal education and experience of the fishermen would affect the mindset, actions and deeds against everything related to the business of fishing by fishermen. The result shows that the average fisherman is a graduate junior high education and very few are able to finish secondary education and no college education completed. Based on the results of this study showed that fishermen statement of 100% need and require agricultural education in order to improve the skills of fishing effort.

Given the importance of the role of education, the development of fishing resources through this route needs to be done. This path can not be done immediately, but it takes time and the right strategy. One effort that can be done is by integrating secondary education (junior high school) with agricultural education, or known as secondary agricultural education for farmers-fishermen.

## **CONCLUSION**

The results show that fishermen in general are in the productive age with the typology of the nuclear family (nuclear family); more than half of the fishermen have junior secondary level education level; categorized fishing experience for a long time, namely 18.26 years; fishermen have the motivation to keep working as a fisherman and a hierarchy of compassion (safety needs) by 60%; technical and managerial skills possessed fishermen in general is quite good but the managerial aspects of fishermen still not good.

Most fishermen have high accessibility to the means of catching fish, but only a few fishermen who use the loan capital from non-formal, mostly fishermen actively seek information on fishing technology, relationships fisherman with fish processors / collectors are patterns of patron client, market formed at the study site is oligopsony market, and net income of fishermen can be considered sufficient. There are two alternative models of development resources that agri-minded fisherman with a training model for impact approach to training and education model.

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